

WHAT IS CLAIMED IS:

- 1 1. A communications module, comprising:
2 a data channel operable to translate data signals in at least one direction
3 between a transmission cable interface and a host device interface and having a
4 variably configurable termination impedance at a host device node connectable to
5 a host device; and
6 a termination impedance controller operable to set the variably
7 configurable termination impedance of the data channel.
- 1 2. The communications module of claim 1, wherein the data channel
2 comprises a variable resistance circuit at the host device node.
- 1 3. The communications module of claim 2, wherein the variable
2 resistance circuit comprises a transistor with a voltage-controlled resistance value.
- 1 4. The communications module of claim 2, wherein the variable
2 resistance circuit comprises a resistor connected in series with a switch.
- 1 5. The communications module of claim 2, wherein the variable
2 resistance circuit presents different termination impedances at the host device
3 node in response to receipt of different respective electrical control signals from
4 the termination impedance controller.
- 1 6. The communications module of claim 2, wherein the variable
2 resistance circuit comprises a mechanical switch for selectively connecting the
3 host device node to different termination impedances, and the termination
4 impedance controller enables manual control of the mechanical switch.
- 1 7. The communications module of claim 1, wherein the termination
2 impedance controller is operable to selectively set the variably configurable
3 termination impedance of the data channel to a differential resistance of 150 ohms
4 in a first configuration mode and to set the variably configurable termination
5 impedance of the data channel to a differential resistance of 100 ohms in a second
6 configuration mode.

1 8. The communications module of claim 1, further comprising a
2 housing containing the data channel.

1 9. The communications module of claim 8, wherein the housing has a
2 transmission cable interface end and a host device interface end.

1 10. The communications module of claim 9, wherein the host device
2 interface end of the housing is pluggable into a receptacle of a host device.

1 11. The communications module of claim 1 implemented in accordance
2 with a small form pluggable (SFP) configuration or a small form factor (SFF)
3 configuration.

1 12. The communications module of claim 1 implemented in accordance
2 with a Giga-Bit Interface Converter (GBIC) configuration.

1 13. The communications module of claim 1, wherein the data channel
2 provides multiple channel transmission of data in at least one direction between
3 the transmission cable interface and the host device interface.

1 14. The communications module of claim 1, wherein the data channel is
2 operable to translate data signals in both directions between the transmission
3 cable interface and the host device interface.

1 15. A communications module, comprising:
2 a receiver data channel operable to translate data signals from a
3 transmission cable interface to a host device interface and a transmitter data
4 channel operable to translate data signals from the host device interface to the
5 transmission cable interface, wherein each of the receiver data channel and the
6 transmitter data channel has a respective variably configurable termination
7 impedance at a respective host device node connectable to the host device;
8 a termination impedance controller operable to set the respective variably
9 configurable termination impedance of each of the receiver data channel and the
10 transmitter data channel; and
11 a housing containing the receiver data channel, the transmitter data
12 channel, and the termination impedance controller, and having a transmission

13 cable interface end connectable to a transmission cable and a host device
14 interface end connectable to a host device.

1 16. The communications module of claim 15, wherein each of the
2 receiver data channel and the transmitter data channel comprises a respective
3 variable resistance circuit at the respective host device node.

1 17. The communications module of claim 16, wherein each variable
2 resistance circuit presents different termination impedances at the respective host
3 device node in response to receipt of different respective electrical control signals
4 from the termination impedance controller.

1 18. A method of making a communications module, comprising:
2 obtaining a data channel operable to translate data signals in at least one
3 direction between a transmission cable interface and a host device interface and
4 having a variably configurable termination impedance at a host device node
5 connectable to a host device;
6 mounting the data channel in a housing having a first end connectable to a
7 transmission cable and a second end connectable to a host device; and
8 setting the variably configurable termination impedance of the data
9 channel to a termination impedance value substantially matching a target host
10 device termination impedance value.

1 19. The method of claim 18, wherein the variably configurable
2 termination impedance of the data channel is set after the data channel is
3 mounted in the housing.

1 20. The method of claim 18, further comprising storing the
2 communications module before the variably configurable termination impedance
3 of the data channel is set.